Determinants of Capital Structure of Listed Construction and Infrastructure Companies in India-A Hierarchical Modeling Approach

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Abstract

The capital structure of any firm is at the center of the corporate finance decisions. The corporate firms are attempting to achieve trade-off between the risk and return with various sources of finances raised in different proportions. The capital structure of the firm is influenced by firm level determinants as well as country level macroeconomic variables. The present study is to explore the determinants of capital structure of the listed construction and infrastructure companies in Indian stock exchange. Hierarchical regression modelling is used to decompose the leverage ratio of the sample firms with three levels of independent variables. In the first level, macroeconomic variables such as GDP growth rate, stock market development, inflation and prime lending rate are considered. Next, the firm level determinants of capital structure which are bifurcated into two categories as income statement based variables and balance sheet based variables. The regression model is able to predict ~37 per cent change in the leverage with seven statistically significant variables. The findings of the paper are an extension of knowledge to understand the determinants of capital structure of construction and infrastructure sector operating in India.

Keywords: Construction and infrastructure, hierarchical model, capital structure, India, leverage

1. Introduction

Capital structures of the corporate entities are dynamic in nature. The constituents of the capital structure, whether common stock or debt is not the discretionary decision of the promoter but largely depends on the few internal and external variables. These variables may be firm specific, market specific or macro-economic variables. In some cases it is found that even sector specific variables influence the capital structure of the firm. Therefore, the generalization of the determinants of capital structure has posted a multifacetedtask to the academician and researcher across the globe. The present literature contains empirical evidences on determinants of capital structure for country as a whole; few are cross-country studies and few and sector specific studies. The findings of all the earlier empirical work hold true at the time of study for the sample studied. The present paper is an extension in the area of sector specific study. The aim of the paper is to identify the determinants of capital structure of listed companies from construction and infrastructure sector in India. The selection of the one sector from the Indian economy is due to personal interest of the author.

The present topic is well researched topic over a period of time. The findings from many studies have identified the few determinants of capital structure which are common across the country and across the sectors. However, there is no fixed set of variables which can determine the capital structure. Rather, the determinants are time dependent and in some cases determined by the economic environment of the country as well as the nature of the industry in which the firm operate. This penetratingly justify the necessity of continuous research to see the significance of the determinants of capital structure in a particular industry over a period of time.

Referring to the literature, the determinants of capital structure can be categorized as firm level, time level and industry level. In this study the firm level and time level variables are considered. The objective of the paper

is to identify the direct and accompanying incidental impact of the determinants of capital structure considered by three level of leverage for the listed construction and infrastructure sector companies in India. The impact of independent variables on the dependent variable (leverage ratio of the firm) is decomposed with the help of hierarchical regression model.

Rest of the paper is divided into 5 sections. Section two deals with the comprehensive literature related to topic. Based on the literature, the research gap is identified. Section three deals with the research methodology. This section mention about the sources of data, data filters, period of study and statistical methods applied for the data analysis. Next section is about the findings of data analysis which is followed by discussion about the significant variables. Lastly, the conclusion is presented to summarize the research work along with delimitations of study and the future scope of the present research work.

2. Literature Review

The study of capital structure is an attempt to understand the proportion of sources of funds and its impact on the cost of funds. With every increase of the debt component in the capital structure, the firm moves towards financial distress and carries higher chances of bankruptcy. Therefore firm needs to settle at an appropriate level of "risk-return" trade off**(Baker & Martin2011)**.After breakthrough work on capital structure by **Modigliani & Miller(1958)** popularly known as MM hypothesis, the modern theories of capital structure like Trade-off theory, Pecking order theory, market timing theory and agency cost theory has developed. The modern theories are well tested in different countries at different time period. Most of the studies concluded that few firm specific and few time specific variables are significantly explain the capital structure of the firm.**(Agha et. al.,2013)**. For the purpose of the present study the determinants are classified into three categories i.eincome statement based firm level determinants, balance sheet based firm level determinants and country based macroeconomic determinants. The firm level determinants may be qualitative or quantitative information exclusively related the firm. This study considered only quantitative variables. Further the firm level determinants are classified into income statement based and balance sheet based determinants. This is probably first attempt to bifurcate the firm level determinants based on financial statement. The objective is to understand the inclination of dependent variable towards income statement or balance sheet related variables. Referring to the various earlier works, following is the discussion about firm level determinants of capital structure.

2.1. Firm level determinants of capital structure

Firm Size: the firms are measured as small, medium or large in term of the turnover they achieved in one financial year. The term small, medium and large are not defined universally. The interpretation varies from country to country. Large firms are supposed to earn more revenue from operating activities. Due to this they have better access to capital market and deploy higher amount of capital in the form of debt in the business at lower rate of interest due to their bargaining power.Therefore few studies assume positive relationship between the firm leverage and firm size reported by **Pinches & Mingo (1973), Ferri& Jones (1979), Titman &Wessels(1988), Grinbalt& Titman (1998), Parsons& Titman (2009).**Contrary to this **Diamond (1989)** propose negative relationship between leverage and size citing information asymmetry problems between the shareholder and debt providers.

Profitability:higher profitability indicates the availability of internal funds by the firm. Accordingly firms will first prefer to use the retained earnings and preference for debt capital is secondary. As per the findings of **Donaldson (2000), Myers (1984), Myers &Majluf (1984)** this higher profitability of firms can have lesser debt i.e negative relationship between profitability and leverage ratio. On the other hand, the interest on debt is tax deductible expenditure thus firms enjoys lesser tax outflow due to interest payment on debt. At the same time, the probability of making default in payment of interest is less due to high profitability. Therefore following to **Gaud et al. (2005), Huang & Song (2006)** the firms with higher profits employ more and more debt and exhibit positive relationship with leverage.

Non-debt tax shield (NDTS): a firm can have alternative options other than interest on debt to reduce the tax liability. Mainly the depreciation and amortization (also known as non-debt tax shield) on assets reduces the taxable income and thereby final tax liability of the firm. Referring to the **Cloyd, Limberg, & Robinson (1997), DeAngelo&Masulis (1980)** as the debt brings probability of bankruptcy, owning asses and claiming

depreciation and amortization are cheaper ways to reduce the tax liability indicating negative relationship with leverage. However, the studies are silent on financing pattern of the assets on which depreciation is claimed.

Tangibility:the borrowing by the firm is said to be secured if some collateral is offered to the lender. If the firm have tangible assets, more funds can be deployed in the capital structure by way of debt capital and hence tangibility is positively related with the leverage of the firm as observed by **Booth et al., (2001), Harris &Raviv (1990), Galai&Masulis(1976), Jensen &Meckling(1976), and Myers (1977).** On the contrary more debt will reduce the profitability of the firm. As shareholders are continuously monitoring the cost of fund, every increased in the debt will also increase chances of bankruptcy of the firm. It is observed that the firms can issue more equity on the basis of assets they own and thereby reduces the proportion of debt in the capital structure of the firm. So more the tangible lesser may be the leverage ratio of the firm which means negative relationship between tangibility of leverage ratio found by **Frank &Goyal (2009) and Grossman & Hart (1982).**

Growth opportunities:the firms with greater growth opportunities have to survive to avail those opportunities by reducing the chances of bankruptcy. Therefore**Myers (1977)** reported that the firms with higher potential towards growth opportunities will use less debt in the capital structure indicating negative relationship between growth opportunities and leverage ratio. Conversely if the firm is sure about the positive outcome of the growth opportunities, the qualitative character of the manager will decide the capital structure of the firm. The aggressive manager may rely on debt capital to grasp the potential benefits. In the absence of enough equity and retained earnings, opting debt capital by the firm indicating positive relationship between leverage ratio and growth opportunities as observed by **Myers (1984), Myers &Majluf(1984).**

Distance from bankruptcy:low probability of bankruptcy of firm in near future ensures stable financial position of the firm. The Altman Z score is used to measure the chances of bankruptcy of the firm. Empirical evidences by **Mackie-Mason (1990), Byoun(2008), Kayo& Kimura (2011)** found that firms with high Altman Z score (which means low chances of bankruptcy) are having less debt in the capital structure which states the negative relationship. Financially distressed firms may charge with more rate of interest by the lenders due to increased chances of bankruptcy. This will increase the cost of funds and demotivating the firms to opt for debt at the time when they are close to bankruptcy. It means lesser is the distance from the bankruptcy, lesser is the use of debt in the capital of the firm which shows positive relationship between distance from bankruptcy and leverage ratio of firm.

Liquidity:the benefits of debt can be witnessed by the firm subject to availability of free cash flow of the firm. If enough liquidity is available, the firm will prefer internal funding rather than external debt thereby confirming the negative relationship between liquidity and leverage ratio as per the findings of **Myers &Majluf(1984).**Disagreeing to these views, the empirical evidencesby **Ozkan (2001), Jensen (1986)** claimed that firms who possess higher liquidity can repay short term obligations on time and thereby can accommodate higher amount of debt. Therefore higher the liquidity is associated with higher percentage of debt component indicating positive relationship between the two variables.

Out of the above seven variables discussed, three variables named firm size, profitability and non-debt tax shield are categorized into Income statement based firm level determinants and the remaining variables liquidity, growth opportunities, distance from bankruptcy and tangibility are considered as Balance sheet based firm level determinants. The proxy financial indicator for each of the variables is given in Annexure – I.

2.2. Country specific macroeconomic determinants of capital structure

The country specific macroeconomic variables are also known as the time level determinants of capital structure. In this case the researcher has to take values of the few macroeconomic variables from the country in which the firm operates during the period of research. The most common macroeconomic variables are inflation, growth rate in GDP of the country, stock market development and lending interest rate by the financial institutions of the country. These variables are shortlisted on the basis of literature and availability of data. These macroeconomic variables and their association on leverage is discussed as below:

Inflation: it refers to the declining purchasing power of the consumer over a period of time. Consistent upward movement of inflation leads to higher interest on the borrowed capital. Due to which the equity valuation decreases which ultimately forces managers to opt for more debt financing during inflationary period which confirms positive association between inflation and debt of the firm as researched by **Corcoran (1979), Sinha & Ghosh (2010).**According to **Sheutrim et al. (1993)** the higher interest rate leads to higher deduction of interest and lower tax liability. Therefore firms may go with more debt during inflationary period exhibiting positive relation between inflation and borrowed capital.

GDP growth rate: GDP is the value of goods and services produced in the country during a period. Higher the value of GDP, firms goes for expansion plan due to expected boom in the sales and operating revenue. The expansion is planned with borrowed funds. Such instances advocate for the positive relation between growth rate in GDP and leverage of the firm as reported by the **Deesomsak et al.,(2004), de Jong et al.,(2008).** However, **Ramkrishnan, (2012)**stressed that due to expected increase in the revenue and profitability, firms will discount those future profit by reducing its exposure towards debt to show the negative relation between GDP growth rate and leverage of firm.

Lending interest rate: lending interest rate is rate of interest charged in capital borrowed by the firm. Higher is the lending interest rate, firms get more tax deductible expenses while computing the taxable income which results in lower tax outflow. To avail tax benefit, firms prefer to borrow more and more during the high interest rate period causing positive relation between interest rate and borrowed capital as reported by **Frank & Goyal (2003), Nandy (2008).**On the contrary, **Deesomsak et al.,(2004)**opined that to avoid the financial distress due to higher commitment for the interest, firms reduce leverage either by avoiding it or postponed the borrowing plans.

Stock market development: with upward movement in the stock market, equity valuation increases and leverage ratio decreases. Therefore, to achieve optimum leverage ratio, the firms tends to borrow more during northwards journey of stock market showing positive relation between stock market development and borrowing habit of the firm as per the findings of **Ramkrishnan (2012).** On the other side, if the equity valuation increases, the firm enjoys accumulated profits and justifies the lesser amount of borrowing from outside sources. Therefore according to the **De Jong et al., (2008)**the firms shows lower values for the leverage ratio during the development of stock market of the country

3. Research Methodology

3.1. Research Design

The longitudinal research design is followed in the present work with deductive approach as the theory is already is in existence.**(Bryman & Bell 2018).**The quantitative data is collected from the reliable sources and tested using statistical methods to validate the theory during the period of research. The research work is free from the any subjectivity as the statistical analysis is based on objective data.

3.2. Sample data

Due to the personal interest of the researcher, the study focuses on the one particular sector of the Indian economy. The companies from construction and infrastructure sector listed on National Stock Exchange (NSE) form the sample size for this study. The sample companies are filtered on the basis of availability of data about the all the research variables for the research period. After filtration, 196 companies are eligible for the study. The quantitative data about the research variables is collected from the prowess data base maintained by Center of Monitoring Indian Economy (CMIE). The study also consider few macroeconomic variables like Inflation, GDP growth rate, ratio of stock market capitalization to GDP and lending rate charged by financial institutions. The information about these macroeconomic variables is obtained from CMIE data base. The definition and proxies used for independent variables is given in Annexure – I.

3.3. Time period

The time period of this study contains years starting from 2009 to 2020 (1st of April to 31st of March as followed in India). The financial variables are sensitive to the economic environment. In India, the political stability from last few years have created positive environment for all the business firms. Therefore the study

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period starting from post financial crisis of 2008 up to recent time is long enough to decompose the leverage ratio of listed construction and infrastructure firms in India.

3.4. Statistical Model Using Hierarchical Regression

Initially the data is analyzed using measures of central tendency and measures of dispersion. To decompose the leverage ratio of the sample firms' hierarchical regression is used with three levels of independent variables. **(Kayo & Kimura 2011).** The final model will be suggested after testing the assumption of regression like multicollinearity, presence of outliers and standardized residuals.

3.5. Formulation dependent and independent variables

Leverage ratio which is dependent variable in the present study can be defined by various ways. Following **(Kayo & Kimura2011),**the present study considers the market value of the leverage (MLEV) as appropriate measure for dependent variable. The limitations of ratio based on book values are nullified by taking market values. At the same time the ratios based on market values are more realistic in nature and exhibit precise value of the firm. The formulation of independent variables is enlisted in the Annexure – I.

4. Empirical Findings

4.1. Descriptive statistics

Table.1. Descriptive statistics

Variables	Mean	Std. Deviation	N
MLEV	0.67921	0.305845	862
GDP growth rate	0.06695	0.013418	862
Stock market cap. To GDP	0.77315	0.094526	862
Prime Lending Rate	0.09781	0.006067	862
Profitability	0.09728	0.073018	862
Log Sales	3.68889	0.824909	862
NDTS	0.01740	0.018746	862
Distance from Bankruptcy	1.08329	0.795868	862
Growth Opportunities	1.66242	3.647946	862
Tangibility	0.13478	0.136832	862
Liquidity	1.51138	2.880945	862

(Source: SPSS output table)

The mean value of leverage ratio based on market value (MLEV) is .6792 with standard deviation of 0.3058. The year wise mean value, standard deviation of leverage ratio and independent variables are reported in Table 1. The highest leverage ratio is observed in the for the sample firm Western India Industries Ltd in the year 2014 at 0.73. The lowest value of leverage is observed by Techno Electric &Engi. Co. in the year 2018 at 0.011. Total overall 862 observation are for 87 firms over a period of 10 years. The values of correlation coefficient among the independent variable with dependent variable are within acceptable limit. There is no high value of correlation between the variables and therefore there is no multicollinerityproblem exists.

4.2. Regression Model

Hierarchical regression model is used with 3 blocks of independent variables. The variables are entered using stepwise method using SPSS 26 version to decompose the effect of independent variables on dependent variable. The following regression equation is framed between dependent and independent variables.

$$MLEV = \beta + GDP\ Growth_i + PLR_i + MCap_i + LogSales_i + NDTS_i + Liquidity_i + Bankruptcy_i + Tangibility_i + GrowthOpportunity_i + Inflation_iProfitability_i + E_i$$

The detail description about all of the independent variables is given in Annexure – I. The assumption of regression such as multicolinearity, outliers, normality of residual are checked with the help of Durbin-watson test, cook's distance and residual graphs respectively. The outcome of HLM model is given in the Table 2.

Table.2. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.038	0.001	0.001	0.306156	
2	.352	0.124	0.118	0.287286	
3	.507	0.257	0.251	0.264691	
4	.576	0.332	0.326	0.251113	
5	.608	0.370	0.363	0.244049	1.865

(Source: SPSS output table)

The regressionmodel explains ~*3*7% change in the dependent variable i.e MLEV. The value of *R* square is found very low in the first attempt when country specific macroeconomic variables are entered. The value goes on increasing with subsequent entry of income statement based variables and finally balance sheet based variables. The value of *R*-square has increased from 0.001 to 0.36 confirming influence of each set of variable in a specific hierarchy. Total 10 variables are entered with 3 blocks for which 5 trial runs are executed by the data analysis software.

Table.3. Regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.468	0.315		1.486	0.14		
GDP Growth Rate	0.416	0.702	0.018	0.593	0.55	0.78	1.28
Mcap to GDP	0.088	0.129	0.027	0.686	0.49	0.468	2.14
Prime Lending Rate	2.856	2.144	0.057	1.332	0.18	0.409	2.45
Profitability	0.51	0.176	0.122	2.893	0.00	0.418	2.39
Log Sales	0.021	0.011	0.057	1.938	0.05	0.863	1.16
NDTS	-3.72	0.493	-0.228	-7.551	0.00	0.811	1.23
Growth Opportunity	-0.03	0.002	-0.34	-12.05	0.00	0.929	1.08
Bankruptcy	-0.14	0.016	-0.352	-8.604	0.00	0.443	2.26
Tangibility	0.290	0.222	0.215	3.215	0.00	0.456	2.09
Liquidity	-0.02	0.003	-0.205	-7.148	0.00	0.902	1.11

(Source: SPSS output table)

Out of 10 variables, 6 are found statistically significant at 1% level of significance and one variable at 5% level of significance as reported in Table 3. Out of 7 statistically significant variables, four are having negative coefficient and three are having positive coefficients. In the regression model, first macroeconomic variables are entered followed by income statement variables and followed by balance sheet related variables.The result shows that macroeconomic variables are not significantly explaining the dependent variable. After inclusion of income statement variable, the predicting power of model has increased to 11 per cent.After inclusion of balance related variables, the predicting power of model further increased to ~37 per cent which means financial position in terms of assets and financing patterns of the assets is more important than the operating activities of the firm. However, the value of adjusted square is at lower side indicate there are few unobserved variables which have influence of the value of MLEV construction and infrastructure sector firms in India to the extent of 63 per cent (1-.37). These unobserved variables may be explored in the future studies. ANOVA value shows the statistical significance of the model with p-value of 0.000 as reported in Table 4.

Table. 4. ANOVA Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	29.794	9	3.31	55.582	.000
	Residual	50.745	852	0.06		
	Total	80.539	861			

(Source: SPSS output table)

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5. Discussion

In the present paper, total 11 variables in 3 blocks are entered using hierarchical model. Total 7 variables are found statistically significant. Out of three blocks, the first block is containing the macroeconomic variables i.e growth rate in GDP, prime lending rate, inflation and ratio of stock market to GDP. As per the results of the analysis, all the macroeconomic variables are not statistically significant even at 10%. This is clear indication that for the period of research the capital structure of the construction and infrastructure firms in India are driven by firm specific variables than economic environment of the country. Firm specific financial variables based on income statement and balance sheet possess greater influence on the leverage ratio than the market variables which are common to all.

Second block is for the income statement based variables which includes sales (represent firm size), profitability of the firm and Non-debt tax shield. Profitability and firm size are positive coefficient and statistically significant at 5% and 1% respectively. With regards to profitability, the findings are in contrast with the **De Jong et al. (2008), Viviani (2008), Serrasqueiro&Rogao(2009) and Cheng &Shiu(2007).** The findings help us to assume that the Indian construction and infrastructure firms are more relying on revenue and profits of firm. The positive relationship indicates that as long as profits are available, firms prefer for higher leverage.

The positive coefficient about the firm size as represented by log sales is in line with **Titman &Wessels (1988), Byoun (2008), HewaWellalage&Locke (2012) and Fauzi, Basyith, & Idris(2013).** The positive relationship support that the larger firms prefer high leverage ratio. This is possible due to diversified business model and low bankruptcy cost. At the same time, the larger firms are assumed to have more transparency between investor and manager due to which firms are in position to issue larger amount of debt.

Non-debt tax shield (NDTS) is negatively related with the leverage ratio supporting **Wiwattanakantang (1999), Deesomsak et al., (2004) and Akhtar &Oliver (2009).** A substantial amount of depreciation and amortization expenditure gives better tax incentive to the firms with higher profitability. About the sample firms, it can be said that the firms preferring NDTS as tax saving tools instead of interest on borrowed capital. Therefore Indian construction and infrastructure companies showing less leverage. The negative relationship is especially due to the fact that construction and infrastructure firms possess tangible assets of high value which results in high value of depreciation in the income statement of the firm.

Liquidityshows negative relationship with the leverage ratio which is in line with **Berger et al.,(1997), Chang et al.,(2009), and Titman &Wessels (1988).** More liquidity of the construction and infrastructure firms indicate the operating efficiency of the firm. The better operating efficiency, the firms are reluctant to borrow due to availability of funds from routine operations.

Growthopportunity is negatively associated with the leverage ratio for the construction and infrastructure sector firms in India confirming the findings of **Sayılgan et al.,(2006)** but in contradicting with the findings of **Bayraktaroglu et al.,(2013).** However, the value of coefficient is very low. Therefore the variable is statistically significant, but numerically its influence is negligible on the leverage ratio of the firm. The bidirectional relationship as observed in the earlier studies may be due to the different definition used for the proxy.

Distance from the bankruptcy is represented by Altaman'sz score. The results are in line with trade-off theory, picking order theory and agency cost theory. The observed results are uniform in nature across all the popular theories of capital structure. The negative relationship indicates the risk bearing capacity of the firm in terms of higher debt ratio. As the distance from bankruptcy is less, firms prefer more debt in the capital structure and vice-versa.

Tangibility is significant and positively influencing on the leverage ratio of the firm. The construction and infrastructure firms are characterized by possession of heavy assets in term of equipment and machinery which can be good collateral. The significant positive relationship is in line with **Ranjan&Zingales (1995)**but contrary to **Booth et al. (2001), Sayılgan et al. (2006), Akhtar& Oliver (2009).** The findings on tangibility confirm that the listed construction and infrastructure firms are following trade-off theory of capital structure.

6. Conclusion

This paper is to understand the determinants of capital structure of listed construction and infrastructure firms in India. The dependent variable,market value of leverage ratio is decomposed to the extent of 37 per cent with the help of 3 levels of independent variables. The findings of the study are multidirectional. Though various capital structure theories exist, the study suggests that the results do not follow one particular theory in toto. It is observed that the listed firms in the construction and infrastructure sector in India have shown mixed and contradicting results as compared with earlier empirical evidences. Academicians and researchers have not yet arrived at conclusive remark to decide the exact determinants of capital structure in case of Indian scenario for sample firms. Therefore, onus of the trade-off between risk and return using various sources of finances in different proportion lies on the manager of firms. The firm's manager must recognize the fact that the determinants of firm are time specific and sector specific.

The present study is having two delimitations. First, the researcher have included only one sector i.e listed firms form construction and infrastructure sector. The findings of the study may not be generalized due to the fact that sample firms belong to one sector only. Second, the findings of the study which are in line with or contradicting with earlier evidences may be due to different accounting policies followed in different countries. If the uniform accounting policies are applied across the world, the results may be different than what is observed in the present study.

Conflict of Interest

Author declares that there is no conflict of interest with any individual or institution for this work.

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Annexure.1. Formulation of independent variables

Firm Specific Income Statement Based Variables		
Variable	Formula	Reference
Firm Size	Log values of Sales	Titman &Wessels (1988), Kayo & Kimura (2011), Wiwattanakantang (1999)
Profitability	Ratio of Earning before Tax, depreciation, amortization and interest to Total Asset	Deesomsak et al (2004), Huang & Song (2006)
Non-Debt Tax Shield	$\frac{(Depreciation + Amortization)}{Total\ Assets}$	Titman &Wessels (1988), Huang & Song (2006), Wiwattanakantang (1999)
Firm Specific Balance Sheet Based Variables		
Tangibility	Fixed Assets / Total Assets	Booth et al. (2001), Huang & Song (2006), Kayo & Kimura (2011), Oztekin (2015).
Liquidity	$\frac{Current\ Assets}{Current\ Liabilities}$	Deesomsak et al (2004), de Jong et al. (2008), Byon (2008), Frank & Goyal (2015)
Growth Opportunities	$\frac{(Market\ Value\ of\ Equity\ Shares + (BV\ of\ TA - BV\ of\ Net\ Worth))}{Book\ Value\ of\ Total\ Assets}$	Deesomsak et al (2004), Huang & Song (2006), Frank & Goyal (2015),
Distance from Bankruptcy	Altman's Z Score (1968)	
Country Specific Macroeconomic Variables		
GDP Growth Rate	Growth rate in Country's GDP	Kayo & Kimura (2011)
Prime Lending Rate	Interest Rate Charged by State Bank of India on Business Loan	Deesomsak et al (2004)
Stock Market To GDP Ratio	Ratio of Stock Market Capitalization to GDP	Booth et al (2001), Deesomsak et al (2004)
Inflation	Annual Inflation based on Consumer Price Index (CPI)	Ramakrishnan (2012)